

535,168

Rec'd PCT/PTO 16 MAY 2005

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
3 June 2004 (03.06.2004)

PCT

(10) International Publication Number
WO 2004/046177 A2

(51) International Patent Classification⁷: **C07K 14/22**

GRANDI, Guido [IT/IT]; Chiron Srl, Via Fiorentina 1, I-53100 Siena (IT).

(21) International Application Number:
PCT/IB2003/006281

(74) Agents: **MARSHALL, Cameron, John** et al.; Carpmaels & Ransford, 43-45 Bloomsbury Square, London WC1A 2RA (GB).

(22) International Filing Date:
17 November 2003 (17.11.2003)

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0226734.2 15 November 2002 (15.11.2002) GB
0307131.3 27 March 2003 (27.03.2003) GB

(71) Applicant (*for all designated States except US*): **CHIRON SRL** [IT/IT]; Via Fiorentina 1, I-53100 Siena (IT).

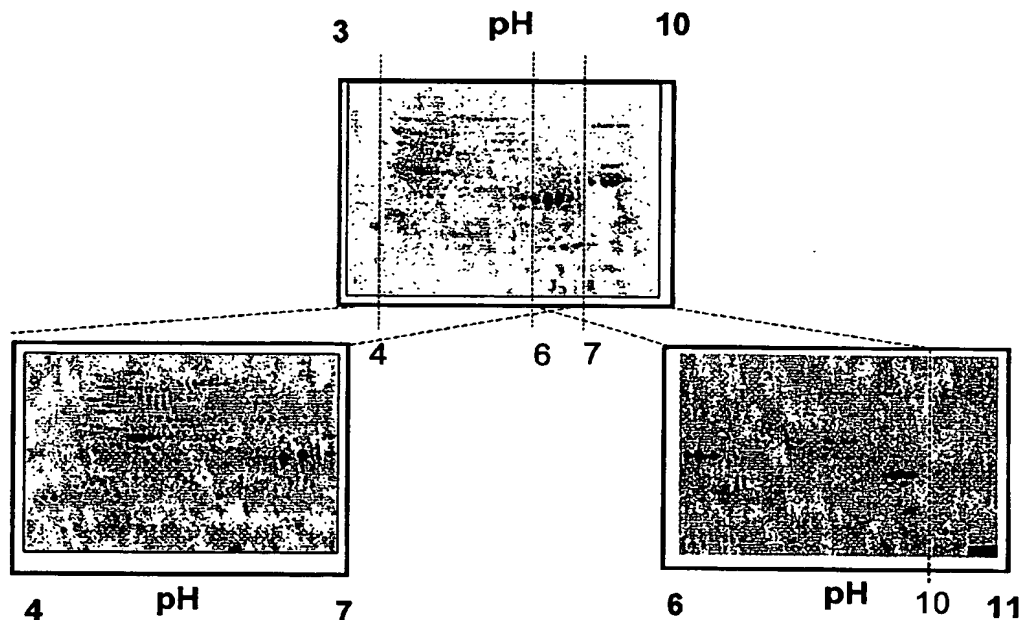
(84) Designated States (*regional*): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **NORAIS, Nathalie** [IT/IT]; Chiron Srl, Via Fiorentina 1, I-53100 Siena (IT).

[Continued on next page]

(54) Title: UNEXPECTED SURFACE PROTEINS IN MENINGOCOCCUS



(57) Abstract: 217 proteins have, contrary to expectations, been found in the membrane of *Neisseria meningitidis*. Of these 217, 76 in particular evaded all algorithmic methods for predicting membrane localisation. Existing knowledge of protein trafficking pathways in meningococcus does not explain how or why these proteins are located in the bacterial membrane *e.g.* there is no apparent biochemical reason for a DNA helicase or a chromosomal replication initiator protein to be found in the membrane. These 217 proteins are provided as membrane proteins.

WO 2004/046177 A2



Published:

— without international search report and to be republished
upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.